

1-12. (CANCELED)

13. (NEW) A multi-geared power shift transmission for a construction machine providing improved installation flexibility, the transmission comprising:

a torque converter (2);
a drive shaft (3) being drivingly coupled to the torque converter (2);
a first counter shaft (5);
a second counter shaft (6);
a third counter shaft (7);
a fourth counter shaft (17); and
an output shaft (4) for supplying driving power;

and each of the drive shaft (3), the output shaft (4), the first counter shaft (5), the second counter shaft (6), the third counter shaft (7) and the fourth counter shaft (17) having a gear unit comprising at least one fixed gear wheel, an idler gear wheel and a shift clutch (8, 9, 10, 11, 12, 13) for coupling the idler gear wheel to the respective shaft such that up to six forward gear ratios and three reverse gear ratios can be engaged;

the gear unit of the drive shaft (3) is only directly drivingly engagable with the gear unit of the first counter shaft (5) and the gear unit of the fourth counter shaft (17);

the gear unit of the first counter shaft (5) is only directly drivingly engagable with the gear unit of the drive shaft (3), the gear unit of the fourth counter shaft (17) and the gear unit of the second counter shaft (6);

the gear unit of the second counter shaft (6) is only directly drivingly engagable with the gear unit of the first counter shaft (5) and the gear unit of the output shaft (4);

the gear unit of the third counter shaft (7) is only directly drivingly engagable with the gear unit of the output shaft (4);

the gear unit of the fourth counter shaft (17) is only directly drivingly engagable with the gear unit of the drive shaft (3) and the gear unit of the first counter shaft (5); and

the gear unit of the output shaft (4) is directly drivingly engagable with at least the gear unit of the second counter shaft (6) and the gear unit of the third counter shaft (7);

whereby that the transmission provides improved installation flexibility.

14. (NEW) The multi-gearred power shift transmission according to claim 13, wherein the transmission further includes a front wheel drive shaft (15) which drivingly engages with a fixed gear wheel of the gear unit of the output shaft (4) when a shift clutch (14) of the front wheel drive shaft (15) is engaged.

15. (NEW) The multi-gearred power shift transmission according to claim 14, wherein the front wheel drive shaft (15) is permanently coupled to the gear unit of the output shaft (4) so that the output shaft (4) provides both front wheel and rear wheel drive.

16. (NEW) The multi-gearred power shift transmission according to claim 13, wherein at least one of the gear unit of the drive shaft (3), the gear unit of the output shaft (4), the gear unit of the first counter shaft (5), the gear unit of the second counter shaft (6), the gear unit of the third counter shaft (7) and the gear unit of the fourth counter shaft (17) has a second fixed gear wheel which provides the transmission with an increased range of transmission ratios.

17. (NEW) The multi-gearred power shift transmission according to claim 14, wherein the front wheel drive shaft (15) is a part time drive which is engagable, via an idler gear wheel, with the at least one fixed gear wheel of the second counter shaft (6).

18. (NEW) The multi-gearred power shift transmission according to claim 14, wherein the transmission includes an auxiliary drive (16) for driving additional equipment.

19. (NEW) The multi-gearred power shift transmission according to claim 14, wherein the transmission is incorporated into one of a telescopic handler and an excavator loader.

20. (NEW) A multi-gearred power shift transmission of a telescopic handler and an excavator loader which provides improved installation flexibility, the transmission comprising:

- a torque converter (2);
- a drive shaft (3) being drivingly coupled to the torque converter (2);
- a first counter shaft (5);
- a second counter shaft (6);
- a third counter shaft (7);
- a fourth counter shaft (17); and
- an output shaft (4) for supplying driving power;

and each of the drive shaft (3), the output shaft (4), the first counter shaft (5), the second counter shaft (6), the third counter shaft (7) and the fourth counter shaft (17) having a gear unit comprising at least one fixed gear wheel, an idler gear wheel and

a shift clutch (8, 9, 10, 11, 12, 13) for coupling the idler gear wheel to the respective shaft such that up to six forward gear ratios and three reverse gear ratios can be engaged;

the gear unit of the drive shaft (3) is only directly drivingly engagable with the gear unit of the first counter shaft (5) and the gear unit of the fourth counter shaft (17);

the gear unit of the first counter shaft (5) is only directly drivingly engagable with the gear unit of the drive shaft (3), the gear unit of the fourth counter shaft (17) and the gear unit of the second counter shaft (6);

the gear unit of the second counter shaft (6) is only directly drivingly engagable with the gear unit of the first counter shaft (5) and the gear unit of the output shaft (4);

the gear unit of the third counter shaft (7) is only directly drivingly engagable with the gear unit of the output shaft (4);

the gear unit of the fourth counter shaft (17) is only directly drivingly engagable with the gear unit of the drive shaft (3) and the gear unit of the first counter shaft (5); and

the gear unit of the output shaft (4) is directly drivingly engagable with at least the gear unit of the second counter shaft (6) and the gear unit of the third counter shaft (7);

whereby that the transmission provides improved installation flexibility; and

an auxiliary drive (16), for driving additional equipment, extends through the drive shaft (3).

21. (NEW) The multi-geared power shift transmission according to claim 20, wherein the transmission further includes a front wheel drive shaft (15) which drivingly engages with a fixed gear wheel of the gear unit of the output shaft (4) when a shift clutch (14) of the front wheel drive shaft (15) is engaged.

22. (NEW) The multi-geared power shift transmission according to claim 21, wherein the front wheel drive shaft (15) is permanently coupled to the gear unit of the output shaft (4) so that the output shaft (4) provides both front wheel and rear wheel drive.

23. (NEW) The multi-geared power shift transmission according to claim 20, wherein at least one of the gear unit of the drive shaft (3), the gear unit of the output shaft (4), the gear unit of the first counter shaft (5), the gear unit of the second counter shaft (6), the gear unit of the third counter shaft (7) and the gear unit of the fourth

counter shaft (17) has a second fixed gear wheel which provides the transmission with an increased range of transmission ratios.

24. (NEW) The multi-geared power shift transmission according to claim 21, wherein the front wheel drive shaft (15) is a part time drive which is engagable, via an idler gear wheel, with the at least one fixed gear wheel of the second counter shaft (6).

25. (NEW) A multi-geared power shift transmission for a construction machine providing improved installation flexibility, the transmission comprising:

- a torque converter (2);
- a drive shaft (3) being drivingly coupled to the torque converter (2);
- a first counter shaft (5, 6, 7);
- a second counter shaft (5, 6, 7);
- a subsequent counter shaft (17); and
- an output shaft (4) for supplying driving power;

and each of the drive shaft (3), the output shaft (4), the first counter shaft (5, 6, 7), the second counter shaft (5, 6, 7), the subsequent counter shaft (17) having a gear unit comprising at least one fixed gear wheel, an idler gear wheel and a shift clutch (8, 9, 10, 11, 12, 13) for coupling the idler gear wheel to the respective shaft such that four forward gear ratios and two reverse gear ratios can be engaged;

the gear unit of the drive shaft (3) is only directly drivingly engagable with the gear unit of the first counter shaft (5, 6, 7) and the gear unit of the subsequent counter shaft (17);

the gear unit of the first counter shaft (5, 6, 7) is only directly drivingly engagable with the gear unit of the drive shaft (3), the gear unit of the subsequent counter shaft (17) and the gear unit of the second counter shaft (5, 6, 7);

the gear unit of the second counter shaft (5, 6, 7) is only directly drivingly engagable with the gear unit of the first counter shaft (5, 6, 7) and the gear unit of the output shaft (4);

the gear unit of the subsequent counter shaft (17) is only directly drivingly engagable with the gear unit of the drive shaft (3) and the gear unit of the first counter shaft (5, 6, 7); and

the gear unit of the output shaft (4) is directly drivingly engagable with at least the gear unit of the second counter shaft (5, 6, 7).